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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,470	03/01/2004	Francois R. Gaultier	003875.P012	2122

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

YUN, JURIE

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.D

Office Action Summary	Application No. 10/791,470	Applicant(s) GAULTIER ET AL.	
	Examiner Jurie Yun	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/27/04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-21 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 11 and 12 are objected to because of the following informalities: it is assumed that there is a typo because the claims as presented are not understandable. Appropriate correction is required.
2. Claim 13 is objected to because of the following informalities: in line 3, it is assumed that "support frames" should be "support frame". Appropriate correction is required.
3. Claim 13 is objected to because of the following informalities: in line 9, it is assumed that the word "than" should be inserted after "(C)", and the following word "and" should be deleted, and has been treated as such (i.e. "(C) than a point (P2) on the second ..."). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what is being claimed.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 7, 13-17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duinker (USPN 4,266,136).

8. With respect to claims 1, 13, 14, and 21, Duinker discloses an X-ray based non-intrusive inspection apparatus/method, comprising: an object support (column 1, lines 26-27); a gantry (Fig. 1) being rotatable about a center axis relative to an object (3) held by the object support; an X-ray source (1) mounted to the gantry and providing X-rays that transmit through the object, the X-rays having an included angle (shown in Fig. 1) between first and second shadow lines such that a circle of reconstruction is formed upon rotation of the gantry having a radius from the center axis to a closest point on the first shadow line, a distance from the center axis to a closest point on the second shadow line being less than the radius (column 2, lines 48-53); and a plurality of detectors (2) located in a position to detect the X-rays after leaving the object. Duinker discloses all of the elements except for a support frame. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a support frame in the Duinker apparatus, to securely position the gantry with its rotating parts.

9. With respect to claims 2 and 15, Duinker does not specifically disclose the included angle is less than 75 degrees, however, it would have been obvious to one of ordinary skill in the art to select an angle appropriate to the size of the object being examined.

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10. With respect to claims 3, 4, 16, and 17, Duinker discloses the radius is at least twice the distance (the distance being zero).

11. With respect to claim 7, Duinker discloses the detectors (Fig. 1, 2) are on a curve having a center axis at the X-ray source (1).

12. With respect to claim 20, Duinker discloses the X-ray source (1) rotates relative to a frame and the object (3) does not rotate relative to the frame (column 3, lines 14+).

13. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duinker (USPN 4,266,136) as applied to claims 1 and 14 above, and further in view of Dafni et al. (USPN 5,966,422).

14. With respect to claims 5 and 18, Duinker does not disclose a plurality of X-ray sources mounted at different positions about the center axis. Dafni et al. disclose a plurality of X-ray sources (12A, 12B, and 12C) mounted at different positions about the center axis. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a plurality of sources in the Duinker apparatus, to reduce examination time, as taught by Dafni et al. (column 8, line 62 – column 9, line 4).

15. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duinker (USPN 4,266,136) as applied to claims 1 and 14 above, and further in view of Hoffman (USPN 6,859,514 B2).

16. With respect to claims 6 and 19, Duinker does not disclose the object support is a conveyor belt. Hoffman discloses an object support being a conveyor belt (Fig. 7,

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112). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a conveyor belt in the Duinker apparatus, if inspecting objects as opposed to humans, and to facilitate inspection of many objects without having to handle the individual objects.

17. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duinker (USPN 4,266,136) as applied to claim 1 above, and further in view of Gordon et al. (USPN 5,867,553).

18. With respect to claim 10, Duinker does not disclose the X-ray source includes a vacuum envelope, an electron source providing an electron beam in the vacuum envelope, and a target having a surface on which the electron beam is directed, the surface, when viewed in cross-section in a plane of the center axis, being an angle other than normal to the electron beam so that the X-rays radiate toward the center axis. Gordon et al. disclose an X-ray source (Fig. 2, 42) includes a vacuum envelope, an electron source (80) providing an electron beam (82) in the vacuum envelope, and a target (43) having a surface on which the electron beam is directed, the surface, when viewed in cross-section in a plane of the center axis, being an angle other than normal to the electron beam so that the X-rays radiate toward the center axis. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the X-ray source of Duinker include a vacuum envelope, an electron source providing an electron beam in the vacuum envelope, and a target having a surface on which the electron beam is directed, the surface, when viewed in cross-section in a

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plane of the center axis, being an angle other than normal to the electron beam so that the X-rays radiate toward the center axis, as taught by Gordon et al., to enable precise control of the X-ray beam.

Allowable Subject Matter

19. Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose an X-ray based non-intrusive inspection apparatus wherein the detectors are on a curve having a center axis that is not at the X-ray source, as claimed in claim 8.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jurie Yun
June 9, 2005



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER